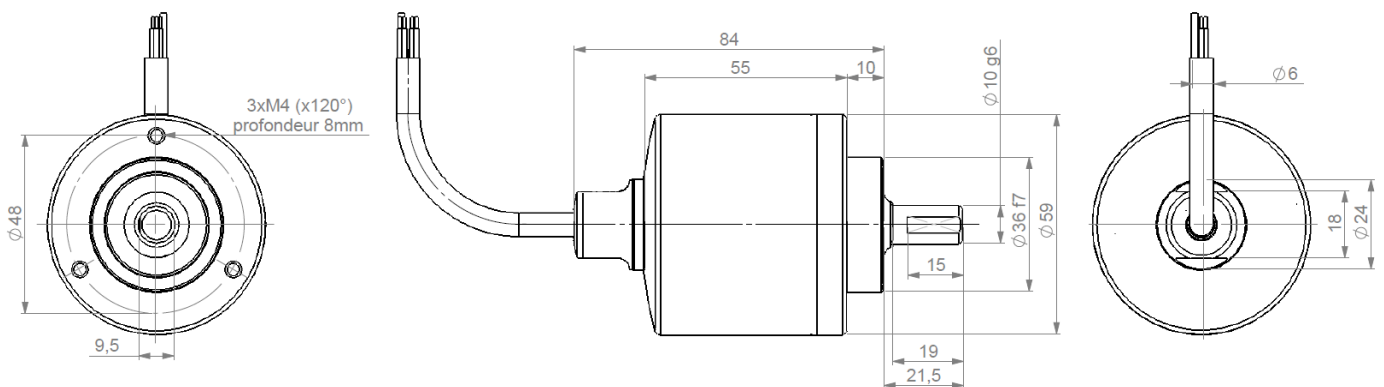


## OPTICAL INCREMENTAL ENCODERS, DXM5S – STAINLESS STEEL 316 - IP69K

- Adapted to food and beverage – pharmaceutical - river – offshore applications,
- Stainless steel encoder (316) with hygienic design,
- Flanges and shaft adapted to the market needs,
- Robustness and excellent resistance to shocks / vibrations,
- Double ball bearings with safety lock system,
- Solid shaft version Ø10mm,
- High protection level IP69K,
- Universal power supply 5 to 30Vdc,
- Industrial standard electronic RS422/TTL and HTL,
- High performances in temperature -30°C to +100°C,
- Optical technology, contactless,
- Resolutions available : up to 80 000 ppr,
- Adapted axial cable gland output.



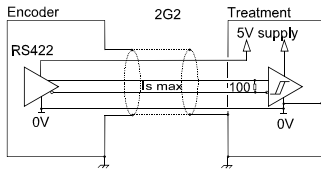
### DXM5S10 DIMENSIONS



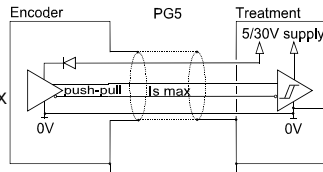
### MECHANICAL CHARACTERISTICS

Material	Shaft: Stainless steel 316	Shaft inertia	$\leq 1,2 \cdot 10^{-6} \text{ kg.m}^2$
	Cover: Stainless steel 316	Torque	$\leq 90 \cdot 10^{-3} \text{ N.m}$
	Body: Stainless steel 316	Shock (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
Bearings	Double ball bearings	Vibration (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (55 ... 2 000 Hz)
Maximal loads	Axial : 250 N	Encoder weight (approx.)	0,600 kg
	Radial : 500 N	Protection(EN 60529)	IP 69K
Theoretical mechanical lifetime $10^9$ turns ( $F_{axial} / F_{radial}$ ) 50 N / 100 N : 12                      250 N / 500 N : 0,5		EMC	EN 50081-1, EN 61000-6-2
Permissible max. speed	4 000 $\text{min}^{-1}$	Isolation	1 000 Veff
Continuous max. speed	3 000 $\text{min}^{-1}$	Operating temperature	- 30 ... + 100 °C (encoder T°)
		Storage temperature	- 40 ... + 100 °C

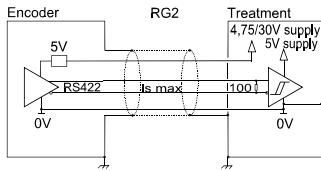
### DIGITAL OUTPUT SIGNALS (SQUARE WAVE SIGNALS)



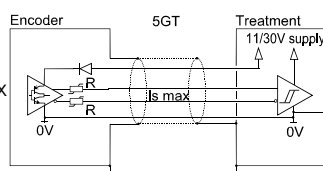
**Electronic 2G2 (100°C, 300kHz)**  
Supply : 5Vdc ± 10%  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (Is=20mA) :  $V_{ol} = 0,5Vdc$   
1 min (Is=20mA) :  $V_{oh} = 4Vdc$



**Electronic PG5 (100°C, 300kHz)**  
Supply : 5 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (Is=20mA) :  $V_{ol} = 0,5Vdc$   
1 min (Is=20mA) :  $V_{oh} = V_{cc} - 2,5Vdc$

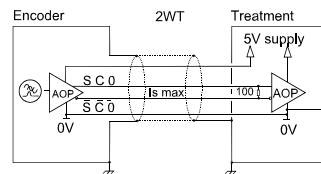


**Electronic RG2 (100°C, 300kHz)**  
Supply : 4,75 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (Is=20mA) :  $V_{ol} = 0,5Vdc$   
1 min (Is=20mA) :  $V_{oh} = 4Vdc$



**Electronic 5GT (70°C, 120kHz)**  
Supply : 11 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (Is=20mA) :  $V_{ol} = 1,5Vdc$   
1 min (Is=20mA) :  $V_{oh} = V_{cc} - 2,5Vdc$

### SINE WAVE OUTPUT SIGNALS



**Electronic 2WT (100°C)**  
Supply : 5Vdc ± 10%  
Cons. without load : 75mA max  
Output signals :  
1Vpp (peak to peak)

### ELECTRONIC PROTECTIONS

Protection against short circuits of the electronics: 2G2, RG2, PG5, 5GT and 2WT  
Protection against reverse polarity for all the electronics except 2G2 and 2WT

Consult us for special electronics : programmable resolution, 5 to 36Vdc, 100mA per channel...

### CONNECTIONS

Type	Cable	0Vdc	+Vcc	A	B	0	A/	B/	0/	Ground
G3	PVC cable 8 wires 8230/020	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	General shielding

### ORDERING REFERENCE (Contact the factory for special versions, ex: electronics 5-36V, special flanges, connections...)

Type	Shaft Ø	Mechanics	Digital signals (Square wave)			Cable	Connection orientation	
DXM5S Optical – stainless steel 58mm encoder	10 10mm	AA 316 stainless steel IP69K Hygienic design	Electronics : 2G2, PG5, RG2, 5GT	Output signals	Resolution	G3 PVC cable 8 wires	Example : A020 axial cable 2m	
			Supply	Output stage	9 : A,A/,B,B/,0,0/ (0 gated A & B)			
			2 : 5Vdc 5 : 11 to 30Vdc P : 5 to 30Vdc R : 4.75 to 30Vdc	G2 : driver 5Vdc RS422 G5 : push-pull GT : transistorized push-pull				
			Sine-wave signals					
			2 : 5Vdc	WT: sine 1Vpp	9 : S,S/,C,C/,L,L/		2 500 max	
Ex:DXM5S	10 /	AA /	R	G2	9 //	08 192 //	G3	A050

### AVAILABLE RESOLUTIONS

**Available resolutions (100°C electronic) :** 50 60 100 120 125 127 150 180 200 240 250 256 300 314 360 375 400 500 512 600 720 750 768 800 927 1000 1024 1200 1250 1280 1440 1500 1800 2000 2048 2400 2500 3000 3600 4000 4096 5000 6000 7200 8000 8192 10000

**Interpolated available resolutions (70°C electronic) :** 1080 2560 2880 3072 4320 5120 7500 5760 9000 10240 10800 12000 12500 12288 14400 15000 16000 16384 18000 20000 20480 24000 25000 28800 30000 32000 32768 36000 40000 40960 43200 48000 49152 50000 57600 60000 64000 65536 80000

**Available resolutions sine-wave signals (100°C electronic) :** 250 256 360 500 1024 2500

Nota : The maximal resolution with the 5GT electronic is 5 000 pulses per turn (non available electronic with interpolation).

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